Process Innovations to Accelerate Home Upgrade Programs
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Context

Started 2010

BPI BA process for the assessment.

Mandatory software for modeling and project submission

Between 2,000- 4,000 projects a year
Worked on the SWS committee in 2010 with NREL.

The Draft version of that document became the work quality requirements for HPwES.

All contractors had to sign a document acknowledging all policies and procedures.
Old Program Management Software.

Buggy, Slow, frequent crashes and issues.

Integrated program software and modeling tool.

Had to create several “work-a-round's” for our stock / climate
Improvements Software 2012/13

Shifted to flexible software for program management

Receives and aggregates HPXML files, invoices, rebate forms for easy access

Allowed contractors to choose their own modeling software.

**Improvements Software program management**

Improved visibility into program operations.

All necessary information in one place for Program managers & M&V

Insights into marketing effectiveness

Insights into contractor performance
Improvements Software

This reduced QA admin labor by 50%

Increased contractor satisfaction 50%

31% Decrease in contractor admin labor reporting

Contractor reports became customizable and sales rates increased
Improvements Measures

Quality of work varied among contractors.

Training for new hires or crew turnover especially problematic.

Contractors were getting a lot of callbacks to fix simple problems.

Contractor profits impacted.
Improvements Measures

FSL Partnered with Advanced Energy and created the “Critical Details”

Initially developed for WAP, adapted to HPWES.

Training for all contractors on how to use the critical details for in house training, and QC.

Critical details became standard on all corrective action reports following a failed inspection.
Improvements Measures

- Contractors now receive quarterly scorecards
- Top 5 Contractor of the year awarded in January
- Special marketing benefits to winners
- Has created some friendly competition
Current Annual numbers

Approximately 3200 Audits.

40% conversion rates.

All contractors are rated 1-10

#1 – 9.96

#35 – 8.83
Takeaways

Whole house programs cannot exist without good contractors.

Good contractors need to be profitable.

Good contractors need consistent training.

Designing and evolving programs should be done with contractor input, and with their perspective in mind.
Home Performance with ENERGY STAR® (HPwES) encourages a whole-home assessment approach to provide the most comfortable, efficient living space, looking at all systems for improvement. Since launching the Arizona HPwES program in March 2010, electric utility Arizona Public Service (APS) and Arizona’s HPwES Sponsor, FSL Home Energy Solutions (FSU), have focused on continuous improvements designed to elevate customer and contractor experience while boosting program cost-effectiveness.

The program saw success in its early years of implementation, quickly growing to serve more than 2,300 homes in its second program year and more than 4,000 in its sixth year. During this program expansion, three areas for improvement emerged:

- **Contractor satisfaction:** Participating contractors were frustrated that the program's mandatory energy assessment software was difficult and time-consuming to use. Contractors also complained that the program's home energy reports were

**Keys to Home Performance Program Improvements**

- **Simplicity:** A whole-home upgrade is a complicated endeavor, but that does not mean that whole home programs need to be equally complicated. Exploring every avenue to streamline and automate program steps can lower implementation costs.

- **Standardization:** Streamlining a program requires transparent and well-defined program standards. The Arizona HPwES program looked to industry efforts, including the Standard Work Specifications for Home Energy Upgrades (SWSS) and Home Performance Extensible Markup Language (HPXML), as the cornerstones for program improvements.

- **Flexibility:** HPXML enabled the program to open its market to a wide range of energy assessment tools. Access to these tools gave contractors more choice and control of how they delivered home performance.

- **Quality:** Delivering consistent and reliable upgrades not only requires a definition of quality, but also a means to manage that quality over time and across all personnel, both program and contractor.
Thanks

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